



PATENT
Atty. Dkt. AMAT/1931/ISM/COPPER/SB

AF 2814

JO/E
8-31-00
C.G.D.W.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: §
Chen et al. §
Serial No.: 08/856,116 §
Filed: May 14, 1997 §
For: Reliability Barrier Integration §
For CU Application §

Group Art Unit: 2814

Examiner: Bernard Souw

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

CERTIFICATE OF MAILING

37 C.F.R. 1.8

I hereby certify that this correspondence is being deposited on August 25, 2000, with the U. S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.

8/25/00

Kurt J. Zabel

Date

Signature

RESPONSE TO FINAL OFFICE ACTION DATED JUNE 29, 2000

In response to the Final Office Action dated June 29, 2000, having a shortened statutory period for response set to expire on September 29, 2000, please enter the following amendments and reconsider the claims pending in the application for reason discussed below.

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IN THE CLAIMS:

Please amend the following claims:

1. (Thrice Amended) A method of filling a feature formed in a dielectric layer, comprising:
 - a) depositing a generally conformal first barrier layer on a bottom and sidewalls of the feature;
 - b) removing the first barrier layer formed on the bottom of the feature;
 - c) depositing a second barrier layer on [substantially] the bottom of the feature using a [directional] sputtering technique that avoids substantial deposition on the sidewalls of the feature, wherein the second barrier layer comprises a material selected from a group consisting of Ta, TaN, TaSiN, TiSiN, and combinations thereof; and